

ABSTRACT

According to the invention, a high capacity alkali primary battery excellent in high rate characteristics is obtained using a positive electrode active substance, wherein the particles of the nickel oxyhydroxide base compound as the positive electrode active substance has a surface coated with a higher oxide of cobalt and comprises zinc and cobalt separately or an eutectic crystal with zinc and cobalt, and a half-width of an X-ray diffraction peak at a diffraction angle at around 18° in an X-ray diffraction pattern of 0.4 to 0.48 obtained by using a $\text{CuK}\alpha$ line as an X-ray source.

A further excellent battery is obtained by using zinc containing a powder with a particle diameter of $75\text{ }\mu\text{m}$ or less in the range of 10% by mass or more and 20% by mass or less.